REMARKS

The Office Action dated February 28, 2007 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 23-42 stand rejected and pending and under consideration.

REJECTION UNDER 35 U.S.C. § 103:

At page 2 of the Office Action, claims 23-42 were rejected under 35 U.S.C. § 103 as being unpatentable over WO 99/53700 to Balck in view of U.S. Patent No. 5,940,763 to Alperovich et al. ("Alperovich"). The Office Action took the position that Balck and Alperovich describe the recitations of independent claims 23, 30, 37, 38, and 42 and related dependent claims. This rejection is traversed and reconsideration is requested.

Independent claim 23, upon which claims 24-29 are dependent, recites a network including a controller configured to communicate with a plurality of radiotelephones via respective communication channels over a carrier. The channels operate at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate, and, in response to an initiation of a call with a second network, configured to initiate a change in a data rate of a transmitting channel from the first data rate to the second data rate.

Independent claim 30, upon which claims 31-36 are dependent, recites a controller configured to operate in a network, the controller including a responding unit configured

to respond to an initiation of a call with a second network. The network communicates with a plurality of radiotelephones via respective communication channels over a carrier, the channels configured to operate at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate. An initiating unit is configured to initiate a change in a data rate of a transmitting channel from the first data rate to the second data rate.

Independent claim 37 recites a radiotelephone configured to operate with a network, the radiotelephone including a controller, in response to a signal from the network, configured to change a data rate of data being transmitted through a channel of the radiotelephone, wherein the network initiates a change in the data rate of the channel from a first data rate to a second data rate in response to an initiation of a call between the network and a second network.

Independent claim 38, upon which claims 39-41 are dependent, recites a method of communicating through a network with a plurality of radiotelephones via respective communication channels over a carrier including operating the channels at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate. The method also changes a data rate of a transmitting channel from the first data rate to the second data rate in response to an initiation of a call with a second network.

Independent claim 42 recites a controller configured to operate in a network, the controller including means for responding to an initiation of a call with a second network, wherein the network communicates with a plurality of radiotelephones via respective communication channels over a carrier, the channels configured to operate at a first or second data rate such that the carrier transmits data through a single communication channel operating at the first data rate or two communication channels operating at the second data rate. The controller also includes means for initiating a change in a data rate of a transmitting channel from the first data rate to the second data rate.

As will be discussed below, Balck and Alperovich fail to disclose or suggest the elements of any of the presently pending claims.

The present invention relates to a system in which there are two networks, for instance an internal network (wireless Intranet office (WIO)) and an external network (GSM), both capable of making internal and external calls. In accordance with one embodiment of the present invention, the WIO network has a gatekeeper, which is capable of dynamically allocating channels to optimize capacity by allocating connections to full-rate or half-rate channels. The deterioration in speech quality caused by changing to a half-rate channel in a connection between two subscribers within the WIO network is lower than the deterioration resulting when one of the subscribers is in the GSM network. Therefore, in a situation where a channel is initiated with a second network, i.e., the GSM network, the gatekeeper will lower the data rate of an existing channel within the WIO network in order to allocate a full-rate channel to the connection

with the GSM network. One of the many advantages of the embodiments of the present invention it to optimize the capacity of two networks while maximizing the quality of the connections.

Balck generally describes a system of dynamically increasing the capacity of a cellular radio communications system to meet temporary high traffic demands. If the determined traffic load exceeds a threshold (16), a higher rate traffic channel over which a dual rate mobile station is communicating is handed over to a lower rate traffic channel available in that cell area (18). However, before making the handover from the higher rate traffic channel to the lower rate traffic channel, it is determined whether a handover is permitted. If so, the intra-cell handover is made to a traffic channel which is currently already supporting another lower rate call. Otherwise, any available lower rate traffic channel is assigned.

Thus, for handover in Balck, a base station controller 56 sends a message to the mobile station via an old full rate traffic channel with information about the new half rate traffic channel frequency, time slot, and output power. The mobile station tunes to the new frequency and sends handover access bursts on the appropriate time slot. Once those bursts are detected and acknowledged, a handover complete message is transmitted by the mobile, and the old full rate traffic channel is deactivated making it available for assignment to other communications. See page 11, line 23, to page 12, line 10.

Alperovich, in turn, generally describes a method and system for effectuating air-interfaces with a plurality of mobile stations within a mobile telecommunications

network. A first mobile station is initially allocated a full-rate traffic channel. When all traffic channels assigned to a particular cell area associated with said first mobile station are seized and a subsequent call connection request is received from a second mobile station located therein, the full-rate traffic channel previously assigned to the first mobile station is divided into a plurality of sub-channels. Each sub-channel then uses a speech coding scheme with a lower data rate. The first mobile station is then re-allocated to use one of the newly created sub-channels and the second mobile station is similarly allocated to use another one of the sub-channels, thus enabling both mobile stations to effectuate speech connections over the serving mobile telecommunications network. See column 2, lines 20-41, column 6, line 35, to column 8, line 67.

In accordance with one embodiment of the present invention, a wireless Intranet office (WIO) network has a gatekeeper, which is capable of dynamically allocating channels to optimize capacity by allocating connections to full-rate or half-rate channels. The deterioration in speech quality caused by changing to a half-rate channel in a connection between two subscribers within the WIO network is lower than the deterioration resulting when one of the subscribers is in the GSM network. Therefore, in a situation where a channel is initiated with a second network, i.e., the GSM network, the gatekeeper will lower the data rate of an existing channel within the WIO network in order to allocate a full-rate channel to the connection with the GSM network. Accordingly, one of the many advantages of the embodiments of the present invention it

to optimize the capacity of two networks while maximizing the quality of the connections.

However, Balck and Alperovich, individually or combine, do not teach or suggest all the recitations of the independent claims. As correctly recognized in the Office Action, Balck does not teach or suggest, at least, "a controller...in response to an initiation of a call with a second network, configured to initiate a change in a data rate of a transmitting channel from the first data rate to the second data rate," as recited in independent claim 23. Rather than changing the data rate of a transmitting channel, when the determined traffic load exceeds a threshold (16), Balck hands over a higher rate traffic channel over which a dual rate mobile station is communicating to a lower rate traffic channel available in that cell area (18). However, although Balck clearly fails to teach such recitation of independent claim 23, the Office Action attempts to extend the scope of Balck by contending that "Balck does disclose the controller interfaces with other controllers and/or other telecommunications networks via a gateway mobile switching center (page 6, lines 15-25). It is also well known in the art to initiate a call connection between two subscribers in two different networks which involves the data rate change for congestion control." However, it is irrelevant whether the controller of Balck interfaces with other controllers and/or networks and initiating a call connection involving a change in data rate when Balck is fundamentally silent as to teaching or suggesting an initiation of a change in a data rate of a transmitting channel from the first data rate to the second data rate as in the present application. (Emphasis added) There is

no suggestion in Balck that would allow a person of ordinary skill in the art to arrive to the particular claimed recitations of claim 23, without using the teachings of the present invention.

The Office Action introduces Alperovich to cure the deficiencies of Balck. However, similarly to Balck, Alperovich also fails to teach or suggest, at least, "a controller...in response to an initiation of a call with a second network, configured to initiate a change in a data rate of a transmitting channel from the first data rate to the second data rate," emphasis added, as recited in independent claim 23. As previously indicated, in Alperovich, when all traffic channels assigned to a particular cell area associated with said first mobile station are seized and a subsequent call connection request is received from a second mobile station located therein, the full-rate traffic channel previously assigned to the first mobile station is divided into a plurality of sub-channels. Each sub-channel then uses a speech coding scheme with a lower data rate. (Emphasis added) However, rather than changing the data rate of a transmitting channel from the first data rate to the second data rate, Alperovich divides the channel and the sub-channel then uses a lower data rate. Therefore, in Alperovich, the data rate of the main channel (the channel from which the sub-channel was divided from) is still operating at the same data rate. There is no change in the data rate in the main channel.

Accordingly, Alperovich does not cure the deficiencies of Balck and, as a result, a combination of Balck and Alperovich would fail to teach or suggest all the recitations of independent claim 23.

Because independent claims 30, 37, 38, and 42 includes similar claim features as those recited in independent claim 23, although of different scope, and because the Office Action refers to similar portions of the cited references to reject independent claims 30, 37, 38, and 42, the arguments presented above supporting the patentability of independent claim 23 are incorporated herein to support the patentability of independent claims 30, 37, 38, and 42.

In view of the foregoing, it is respectfully requested that independent claims 23, 30, 37, 38, and 42 and related dependent claims be allowed.

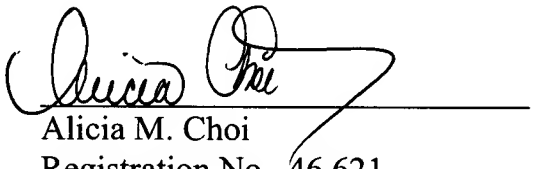
CONCLUSION:

In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 23-42 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
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